The HANFORD REACH

August 7, 2000

A publication of the U.S. Department of Energy for all Hanford Site employees

FLUOR AIMING HIGH: As if demonstrating that Fluor's new industrial building is just seconds away from the Tri-Cities Airport, the U.S. Air Force Thunderbirds streak through the sky over the building during the Water Follies air show July 23. The building "shell" in the Pasco Processing Center, completed five months early on July 31, was built by Fluor as part of a plan to attract a major new employer. It has generated interest from companies that had different needs, and all were impressed with the Tri-Cities. "The Fluor building has already helped bring 200 jobs to the city of Pasco," said Jim Toomey, executive director of the Port of Pasco.

DOE fills top two positions at Office of River Protection

Energy Secretary Bill Richardson announced on Aug. 2 the appointment of Harry Boston to head the Department of Energy's Office of River Protection. Boston, who has been serving as the deputy manager for Site Transition in the DOE Richland Operations Office since last December, was named acting manager of ORP with the intention of making the assignment permanent.

Leif Erickson, who has been ORP assistant manager for Systems Acquisition, was named deputy manager.

Boston replaces Dick French, who was put on administrative leave July 28 — the same day BNFL Inc. was putting in its last day at Hanford and three days before the DOE released a draft request for proposals for a new design-and-construction contractor for the planned tank waste vitrification plant (see next story). French and DOE Headquarters personnel reportedly disagreed about the procurement process

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Boston

DOE fills top two positions at ORP, cont.

for the new contractor.

"Dr. Boston is the right person for this challenging assignment," said Richardson. Before joining DOE-RL, Boston was vice president of Tank Waste Retrieval and Disposal for Lockheed Martin Hanford, predecessor to tank-farms contractor CH2M HILL Hanford Group. He holds advanced degrees in biological and engineering sciences from Cornell University, the University of Washington and the University of Wisconsin.

In his new assignment as head of ORP, Boston reports to Carolyn Huntoon, DOE assistant secretary for Environmental Management.

Erickson has been at Hanford since 1986 in various capacities. He served as a supervisory engineer for Pacific Northwest National Laboratory. Among other accomplishments, he was responsible for setting up design, construction and start-up offices for the Environmental Molecular Sciences Laboratory. ❖

Draft RFP issued for Hanford vit plant

The Department of Energy Office of River Protection has issued a draft request for proposals for the design and construction of a plant to treat and immobilize Hanford's tank wastes.

The draft RFP is the next step toward selecting a contractor to replace BNFL Inc. On May 8, Secretary of Energy Bill Richardson rejected BNFL's proposal to build the plant under a privatized contract, and the company's last day on the design project was Friday, July 28. River Protection Project contractor CH2M HILL Hanford Group is managing the design team on an interim basis.

DOE is conducting a streamlined and open solicitation process to meet its commitments to the other Tri-Party Agreement signatories, the Environmental Protection Agency and Washington State Department of Ecology. Under this streamlined process, a formal RFP will be issued by the end of this month.

In the meantime, DOE has already sought and received expressions of interest in the project, and a pre-solicitation conference was held in Richland June 7. One-on-one meetings with industry representatives took place in Washington, D.C., the following week.

DOE will select a single contractor to design, construct and commission the vitrification plant. Interested bidders should visit the Web site **http://www.hanford. gov/orp/procure/solicitations.html**. The site includes the project's background, the acquisition plan, amendments, clarifications and questions and answers. Submit questions and comments via e-mail by Aug. 14 to contracting officer Michael Barrett at Michael_K_Barrett@rl.gov. ❖

The HANFORD REACH

Distribution questions: call the Mailroom, 375-5170

See the *Hanford Reach* on the Web at: **www.Hanford.gov/reach/index.html**

Keith Klein, Manager
DOE Richland Operations Office

Harry Boston, Acting Manager
DOE Office of River Protection

DOE Richland Operations Office
Guy Schein, A7-75, 376-0413, fax 376-1563
DOE Office of River Protection
Mig Owens, H6-60, 376-4751, fax 376-8532
Fluor Hanford
Editorial office: B3-30, 376-4639, fax 376-5704
Craig Kuhlman, manager of Communications
Dennis Cresswell, editor
Cornelia Brim, associate editor
CH2M HILL Hanford Group
Ace Etheridge, H7-07, 372-8058, fax 372-8036
Bechtel Hanford, Inc.
Sue Kuntz, H0-09, 375-4673, fax 372-9115
Hanford Environmental Health Foundation
Diane Turney, H1-53, 376-4101, fax 372-3139
Pacific Northwest National Laboratory
Katie Larson, K1-55, 375-3698, fax 375-2221
Design: Sally Green, Lockheed Martin Services, Inc.

The *Hanford Reach* is published weekly for all employees of the U.S. Department of Energy's Hanford Site.

Deadline is 10 a.m. Thursday, 10 days prior to Monday publication. All articles are subject to editing. Contact the editors by phone, fax, site mail or e-mail.

Printed on recycled and recyclable paper.

Hanford Reach, B3-30
Fluor Hanford
P.O. Box 1000,
Richland, WA 99352
Fax: 376-5704
e-mail:
Hanford_Reach@rl.gov
Phone: (509) 376-4639

Hanford instruments calibrated at Energy Northwest

On June 30, DynCorp Tri-Cities Services, Inc. marked the first anniversary of its successful contract with Energy Northwest to provide the Hanford Site with standards laboratory calibration support. Outsourcing the calibration of Hanford Site instruments reduced the calibration turnaround time from over six months to just over three weeks. The overall cost for calibration services is also about 26 percent lower since Energy Northwest has performed the calibrations.

On June 19, 1998, DynCorp Tri-Cities was directed to shut down the Hanford Standards Lab, based on identified pre-existing conditions and results of several reviews and independent assessments. A request for proposals to provide calibration services to the Hanford Site was issued Aug. 31, 1998. The calibration services contract was subsequently awarded to Energy Northwest (formerly the Washington Public Power Supply System) on April 1, 1999.

During the three-month transition period from April to July 1999, the former HSL technicians and support personnel became employees of Energy Northwest. At the same time, HSL calibration standards were transferred to Energy Northwest, and the Energy Northwest Standards Lab was reconfigured to take on the increased workload. Work was authorized to begin on July 1, 1999. The first item delivered to the ENSL for calibration was the Fast Flux Test Facility Heise pressure gauge. Since then, more than 3,000 items have been delivered for calibration.

ENSL personnel quickly learned about the diverse measuring equipment in use on the Hanford Site. Laboratory personnel perform all calibrations to written procedures as required by both their quality manual and ANSI/NCSL Z540-1-1999, the national standard for calibration. ENSL had about 300 procedures in place to support the Columbia Generating System. As a result of the incoming Hanford work, ENSL now has more than 600 active calibration procedures.

Rick McCollum, the measuring and testing technical authority for the Waste Management Project noted, “The process that Energy Northwest follows for performing instrumentation calibration in accordance with the ANSI/NCSL Z540 Standard was beneficial in meeting one of the many Waste Isolation Pilot Plant certification requirements. On many occasions, we called on the DynCorp/Energy Northwest team to support last-minute calibration tasks and received excellent service and turnaround.”

Approximately half of the new procedures deal with one-of-a-kind instruments found throughout the Hanford Site. The other new procedures deal with either older equipment, or the instrumentation supporting the varied and unique projects that make up the site’s mission. The necessary but time-consuming process of procedure development has contributed to longer than usual turnaround times for some equipment.

Continued on page 4.

Bill Calloway calibrates a site weight set at the Energy Northwest Standards Lab. Callaway is a former Hanford Standards employee who was transitioned to ENSL when the lab was outsourced.

Hanford instruments calibrated at Energy Northwest, cont.

"Before ENSL took over, the other off-site calibration labs would return our older equipment not calibrated, stating, 'No procedures to reference to.' Now it may take a little longer to get our equipment back the first time, but at least ENSL is trying to prepare these procedures to calibrate our equipment," said Jane Boyd, the FFTF measuring and testing equipment custodian. "We have also noticed that work is not being held up because of the lack of calibrated equipment."

Interactions and cooperation among many groups are required for this program to operate efficiently. ENSL personnel are continually reviewing the calibration process for ways to enhance the overall program. Streamlining the process to send in equipment for calibration has reduced the number of documents required to accompany the equipment.

A Hanford Intranet Web-based ordering system is being developed by Fluor Hanford, Lockheed Martin Systems, Energy Northwest and DynCorp. It will generate a one-page contract release with all pertinent information required to request a calibration, and it allows payment for calibration services by credit card. The new system will halve the time required to prepare an item for shipment to ENSL. ✦

Security chief gives Hanford high marks

Hanford security efforts earned praise from the Department of Energy's security "czar" during a site inspection July 25.

"Hanford is one of the best sites I've visited," said retired Air Force General Eugene Habiger, director of the DOE Office of Security and Emergency Operations. The office was formed last year to invigorate security throughout the DOE complex.

Habiger has just finished the first round of visits to every DOE site. Since beginning the visits, he has implemented a number of policy changes and has said he will revisit the sites about every six months.

Hanford was one of the last sites to be assessed in a personal visit by Habiger, who explained that this reflects his confidence in Hanford's security effectiveness. He said it's one of several sites he "doesn't worry about."

Habiger visited Pacific Northwest National Laboratory, toured the Hanford Patrol Training Academy, received briefings on the Hanford fire and the site's cyber security program, and reviewed information about security training and security information resources.

The general said he views cyber security as the biggest challenge for DOE because there is no technology to overcome human error or lapses in individual integrity. "How do you protect against single-point failure?" he asked. "You can't. Our program is not one of risk avoidance but of risk management."

Jim Spracklen, director of the Office of Security and Emergency Services for the DOE Richland Operations Office, said the visit went well. "Everyone did a fantastic job with the general," Spracklen said. "He looks for indicators such as conduct of operations, discipline in approach, focus, rigor, knowledge, performance and demeanor. The PFP folks, Spent Nuclear Fuel, the Hanford Patrol, Protection Technology Hanford, PNNL and the Benton County Sheriff's Office all did a first-class job on this visit." ✦

Colonel Safety says 'play it cool' this summer

Dear Colonel Safety:

Yesterday I was working outside. Although we had discussed the potential for heat exhaustion at our pre-job briefing, I still did not fully appreciate how quickly heat exhaustion can sneak up on a person. Fortunately my co-workers noticed my condition and got me into some shade before I got really weak. Could you write an article on heat stress?

Nearly Cooked.

Dear *Nearly Cooked*:

You are fortunate to have co-workers who recognized your heat exhaustion and took appropriate measures to get you out of the sun and to cool you down. As you found out, one of the main purposes of a good pre-job briefing is to identify potential safety hazards and discuss emergency response actions. The time we spend developing comprehensive work packages and discussing job hazards can pay big dividends in the early detection and prevention of unsafe working conditions.

As I was thinking about heat exhaustion, I realized that if comprehensive pre-job briefing works at Hanford, why wouldn't it work at home? The importance of discussing and preventing heat exhaustion at home is of particular importance to me because I remember the time I went off on a cross-country hike with my infant son on my back without thinking about the potential of dehydration and heat exhaustion.

After walking some distance, I noticed the boy was not behaving normally. He wasn't chattering, pulling my hair or kicking me in the back — some of his favorite activities. When I took off the backpack and looked at him he was flushed and obviously overheated in his nylon seat, and I had no drinking water. Fortunately, I was able to cool down my son, and the story has a happy ending.

Because of this hike, my family now makes a point of discussing potential hazards and inventorying safety supplies before we forge off on new adventures. Just remember the life you save may be your child's.

Heat exhaustion is commonly called sunstroke or sun poisoning, and results from overexposure to the sun or elevated body temperature. Unless you recognize its symptoms and act quickly, heat exhaustion can become a serious medical emergency. The minor symptoms of heat exhaustion are prickly heat, muscle cramps, irritability or dizziness. Severe symptoms are convulsions, delirium and erratic pulse rates, which can be fatal.

If you or your children and friends are getting too much summer heat:

Get out of the sun. Find a shady spot and rest. Remember the sun is not your friend when your body functions are shutting down from heat.

Cool down. Anything you do to lower your body temperature will help you recover. Getting wet will help. Your muscles are especially susceptible to cramping when you are suffering from heat exhaustion, so jumping in the river may not be a great idea. Ice out of the cooler is another good way to cool down. Don't overdo the ice treatment, but don't wait around for Mother Nature to correct the problem. Sometimes the difference between a mild case of heat exhaustion and a medical emergency is measured in minutes.

Drink lots of liquid. Dehydration is a part of heat exhaustion. Cool water and fluids that will replace body electrolytes and minerals are the ticket. Even when a person doesn't feel thirsty, the body needs the fluid and you need to make sure the person is drinking. A person suffering from heat exhaustion should not drink alcohol. Alcohol does not replenish body fluids. It dehydrates the person further.

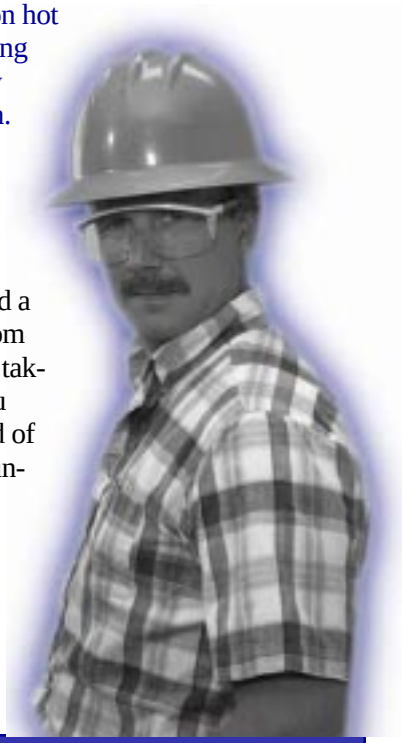
Go to the doctor. Seek trained medical help after heat exhaustion. Heat exhaustion is the precursor to heat stroke, and heat stroke can be fatal.

Here are some tips to avoid heat exhaustion and overexposure to the sun during summertime work or recreation:

- Wear loose cotton clothing, wide-brimmed hats and sunglasses.
- Use SPF (sun protection factor) 30+ sunscreen.
- Don't take salt tablets. Heat stress publications recommend against the use of salt tablets because most people don't need additional salt beyond what is available in a balanced diet. Some additional salting of food during periods of work or exercise on hot days may help, but maintaining adequate hydration is the key to preventing heat exhaustion.
- Drink plenty of water.

When planning work on weekends, make sure to take the sun into consideration. Not only will you avoid a lot of physical discomfort from sunburns and heat stress, but taking precautions will keep you playing until Monday instead of lying flat on your back by Sunday.

For additional answers to your safety questions, write to David P. Nelsen at "Colonel Safety, S6-71." ❖



Hanford health physicist attends conference in Hiroshima

Tim Ledbetter, PNNL

Terri Aldridge, a health physicist in the Office of the Assistant Manager for Science and Technology of the Department of Energy Richland Operations Office, recently had the unique opportunity to view Hanford and the nuclear age from a new perspective. She was one of the National Health Physics Society's delegates to the 10th International Congress of the International Radiation Protection Association, held in Hiroshima, Japan, in May.

Aldridge has worked at Hanford for 30 years.

Hiroshima, located on the western end of Japan's largest island, Honshu, is forever linked to the development of nuclear capabilities. On Aug. 6, 1945, the United States dropped an atomic bomb on the city, inflicting severe damage and hastening the end of World War II. Hiroshima eventually was rebuilt and now is dedicated to promoting world peace.

"The IRPA conferences occur every four years, and are held in a different country each time. It just so happens that this year the association met in Hiroshima, and I was selected by the NHPS to attend. It was a once-in-a-lifetime opportunity, and I was honored to be named as a delegate," Aldridge said.

Visiting the city, she said, "has brought everything together in my mind. I'm very familiar with Hanford and the site's role in national security, and now I have seen Hiroshima."

Aldridge said if visitors to Hiroshima did not know the city's history, it might be difficult, at first glance, to tell that anything catastrophic had ever happened there. "Hiroshima is very clean and green, with lots of trees and flowers. There is a large museum and various monuments paying tribute to the victims. One structure, a domed building, was not completely destroyed by the bomb. It still stands today, and is one of the few visible remnants of the blast."

Before arriving in Japan, Aldridge was somewhat concerned about whether the city's residents would welcome Americans. She was quickly put at ease. "I detected no animosity on the part of the Japanese people. They were friendly and receptive. In fact, Hiroshima students posed in photos with me and my daughter, who accompanied me to Japan."

At the conference, which was attended by representatives of 26 nations, Aldridge participated in sessions highlighting a wide range of radiation-related issues, from worker protection and the use of isotopes in cancer treatment, to a review of last September's criticality accident at a fuel conversion plant in Tokaimura, Japan. "In fact, while we were in Japan, one of the people who had been injured in that accident died," Aldridge said.

The conference, she notes, seeks to focus international attention on peaceful uses of radiation and its benefits to people and the environment, but also gives participants an opportunity to network with each other and compare and contrast their countries' radiation standards and practices. "I met many people who do the same kind of work I do, and I hope to keep in touch with them to share future issues and ideas," she explained.

"Attending the conference and visiting Hiroshima were unique, terrific experiences," Aldridge added. ✦

Terri Aldridge (left) of DOE-RL's Office of the Assistant Manager for Science and Technology and Allen Brodsky of Maryland were among the radiation conference delegates who visited the Hiroshima Peace Memorial Museum.

A Hiroshima building known as the "A-bomb Dome" was not completely destroyed in the atomic bomb blast of Aug. 6, 1945. Preservation efforts saved the structure, which now is part of the city's Peace Memorial Park, below.

100N Area cleanup a challenge for ERC team

Steve Sautter, BHI

Field personnel spray a combination of water and a fixative agent to eliminate dust and the potential spread of contamination as concrete cover panels are crushed to provide access to the 116-N-3 Trench. The ERC team began excavating contaminated soil and debris from the trench on Friday, July 21.

The Bechtel Hanford-led Environmental Restoration Contractor team is facing a new set of challenges as it begins the removal of contaminated material near Hanford's N Reactor, the site's last operating production reactor.

The goal is to safely and efficiently dispose of waste that is significantly more radioactive than the other ER remediation sites. It's a challenge the team is addressing with basic radiation protection principles of time, distance and shielding as well as with employee involvement and training.

The N Reactor remediation effort entails removing about 150,000 tons of soil and debris from the holding ponds (called "cribs") and trenches that held the transported contaminated water discharged from the reactor coolant system and the fuel basin.

N Reactor was shut down in 1987. The 13 years of inactivity at the site constitute a relatively short period of time compared to other ER Project cleanup sites. As a result, the contamination is up to 50 times more radioactive.

The contaminated materials will be safely deposited in the Environmental Restoration Disposal Facility, or ERDF, adding to the more than 2.4 million tons already disposed of there by the ERC team.

"I am excited about beginning remediation in the N Area," said Glenn Goldberg, 100 N Area Remedial Actions Project manager for the U.S. Department of Energy's Richland Operations Office. "These are two of the most contaminated cribs on the Hanford Site, and the start of this remedial action reinforces DOE's commitment to cleaning up waste sites and protecting the environment."

Rick Donahoe, project lead for BHI, said the ERC team, which includes Foster Wheeler Environmental Corporation, has taken extra precautions to minimize personnel radiation exposures and any impacts on the surrounding environment. "We have reviewed the potential exposure issues at length with our crews and every person has received project-specific training," said Donahoe. "In addition, supplemental dosimeters will help us to monitor exposure."

Efforts to minimize radiation exposures not only involve the crews that will be physically working around the cribs and trenches, but also the employees at the ERDF and truck drivers transporting the materials.

Ben Moyers, area superintendent at ERDF for BHI's Remedial Action and Waste Disposal Project, explained some of the steps being taken at ERDF. "We are placing lead shielding between the disposal truck drivers and the drag-off boxes to limit driver exposure," said Moyers. "And we will move the materials from the remediation site to ERDF on swing shift when there are fewer personnel in the work areas and along transport routes."

The Washington State Department of Ecology has regulatory oversight of the project. Rick Bond, N Area Project lead for Ecology, is pleased with the preparations for the project. "The project team has been very thorough and professional," said Bond. "While the project is very challenging, the team has demonstrated that they are ready to meet those challenges."

Over the projected 26-month duration of this job, the ERC team will continue the practices that protect the surrounding environment. "As with all soil remediation projects, we take precautions to ensure that we do not spread the contamination," Donahoe explained. "An example is our requirement to temporarily halt soil removal when winds are strong enough to generate dust in the area."

Donahoe also said crews use water to suppress any dust while work is under way. And, at the end of the workday, they will cover the remediation site with a fixative spray to contain the contamination. ✦

FEMP tips to conserve electricity, stay cool

You've heard it often enough lately—"Is it hot enough for you?" A grim smile or shake of the head and a retreat to an air-conditioned building is often the reply to that question.

The high summer temperatures stretch the capabilities of the electrical generating and transmission systems in parts of the nation. Last summer, utilities implemented rolling blackouts and requested voluntary reductions to meet the increased demand for electricity during heat waves.

For government workers, a reliable source of electricity is mission critical, and for others in the community, such as the elderly, power can be a matter of life and death. Whether you are at work or at home, you can take action to ensure reliable power supplies.

The Federal Energy Management Program of the Department of Energy reminds you to:

- Turn off lights when leaving a room for more than a minute
- Turn off task lights and turn off general and overhead lights when they are not needed
- Turn off display and decorative lights
- Turn off printers, copiers and monitors when they are not in use
- Activate and use the power saver and sleep features on computers and appliances
- Shut off coffee pots, radios, fans and other appliances when you leave work
- Set the thermostats to pre-cool spaces at off-peak times
- Loosen clothing and dress casually during the warmest hours
- Make certain vent grills and registers are not blocked by plants, books or furnishings.

Conserve electricity by shutting off appliances and lights when they are not in use, and you will ensure a reliable source of electricity to stay cool and do your work. ✦

OFF TO PORTSMOUTH: The Department of Energy and Fluor Hanford have begun shipments of surplus uranium to the DOE site in Portsmouth, Ohio, that will substantially reduce Hanford's inventory. Donald Monday of Waste Management Technical Services loads the truck for the first shipment, which left Hanford July 27 and arrived at Portsmouth on Aug. 1. That shipment included approximately 16 metric tons of uranium trioxide powder in three full metal "T-Hoppers" — inverted funnel-shaped containers surrounded by a heavy frame. A total of 670 metric tons of surplus uranium trioxide powder and 235 metric tons of uranium metal billets will be shipped to the Portsmouth Site. Of the 1,866 metric tons of uranium at Hanford, these are the only two forms determined to have potential market value.

PNNL wins three R&D 100 Awards for innovation

Susan Bauer, PNNL

Researchers at the Department of Energy's Pacific Northwest National Laboratory and their collaborators have developed three of the 100 most significant innovations of 2000, according to *R&D Magazine*. Resulting technologies are reducing losses on food production lines and helping to ensure the safety of food, and may replace glass with engineered plastics in electronic display panels.

Each year *R&D* conducts the R&D 100 Award competition to honor the most promising new products, processes, materials or software developed throughout the world. Awards are based on each achievement's technical significance, uniqueness and usefulness. Pacific Northwest researchers have received 54 R&D 100 Awards since 1969.

PNNL's winning technologies for 2000 are:

A system that immediately identifies cutting blade failures on food processing lines - Broken knives can cause irregular cuts and generate truckloads of product that doesn't meet quality specifications. Processing plants incur costs to re-sort the product and have the waste shipped away for use as animal feed.

Human inspectors may take up to an hour to catch blade failures. However, the Knife Failure Detector developed by PNNL and the Lamb-Weston Technical Research Center in Richland takes less than one second to spot part failure and trigger redirection of product flow.

The detector system combines wireless power and data transmission with acoustic-based detection methods. It's designed to operate in severe conditions, including constant immersion of equipment in water.

This real-time process monitoring technology can be used to ensure product quality and equipment integrity in other industrial situations where measurements are difficult to obtain, such as detecting pipe leaks or monitoring rotating machinery.

A radiation dose measurement system that is low-cost, versatile and precise - Recent government approval of irradiation to kill bacteria in red meat expands the need for an accurate, inexpensive way to measure how much radiation food and other products are receiving. This dosimeter technology, licensed to Sunna Systems, Inc. of Richland offers instantaneous readings that can be repeated.

The measuring unit uses light instead of heat to read the amount of radiation passing through the product. The dosimeter can measure a wider range of doses than other technologies, is resistant to most environmental conditions and has a long shelf life.

Food processors using electronic pasteurization require an extremely robust, easy-to-use and cost-effective dosimeter that can be mass-produced. The Sunna Dosimeter meets all these criteria. It can also be used in medical equipment sterilization and radiation processing or curing of environmentally friendly inks and paints that require no solvents.

PNNL's ultra barrier coatings for flat panel displays protect this Organic Light Emitting Device, or OLED, from moisture. This coated test unit has survived eight months of exposure to air and continues to function while being completely submerged in water.

Continued on page 10.

PNNL wins three R&D 100 Awards for innovation, cont.

A coating that makes possible plastic display panels for electronics - If television screens and displays for lap-top computers or cell phones were made of plastic, they would weigh less, be more rugged and one day might even be flexible enough to roll up.

Plastics are not used for these display panels because oxygen and water vapor easily pass through plastic to damage the electronics. But now, two ultra barrier coating products licensed to Vitex Systems, Inc. of Sunnyvale, Calif., offer extremely high levels of barrier protection. They will allow plastics to play a significant role in the display industry.

The products are Flexible Glass engineered substrates and Barix-coating. Without them, even the moisture in the air could cause sensitive displays to fail in a matter of days. However, coated test units have survived eight months of exposure to air and continue to function while submerged in water.

R&D will honor the researchers who developed these three technologies at a "black tie" event at the Museum of Science and Industry in Chicago Sept. 27.

More information on these and previous PNNL R&D 100 Awards can be found at **http://www.pnl.gov/main/welcome/awards/rd100/**. Direct business inquiries to 1-888-375-PNNL or send e-mail to inquiry@ pnl.gov. ✦

The Slavutych book project:

The teachers behind student-authored tale of two cities

One of the big differences Ukrainian Inna Ryazanova noticed between Americans and her native countrymen was Americans' practical approach to life, compared with Ukrainians' more poetic outlook. Both approaches played an important role in the development of a unique book jointly written by students from each country about their respective nuclear communities.

The book, *Nuclear Legacy: Students of Two Atomic Cities*, is the collaborative effort of nearly 40 students from Richland and the Ukrainian city of Slavutych. Richland's legacy is Hanford. Slavutych's is Chornobyl.

The book was the brainchild of Hanford Middle School teacher Maureen McQuerry. She partnered with Ryazanova and other Slavutych teachers to assist their students with the publishing project. Ryazanova helped coordinate and edit much of the Ukrainian students' input, which reflects a lyrical, emotionally connected view of their nuclear culture.

McQuerry coordinated the Hanford Middle School students' writing and applied American practicality by partnering with Bechtel Hanford, Inc. and Battelle for funding and other support of the intercultural project.

Inna Ryazanova (left) and Maureen McQuerry provided oversight and direction of students in Slavutych and Richland who published a book on life in their respective nuclear communities.

Project 'too big'

According to Ryazanova, who was in the United States in July for a book promotion tour, even the students met the initial idea with a fair amount of skepticism. "In the beginning, they thought it was too big an undertaking and didn't think they could do it," she said. "Now they are very impressed and proud of their accomplishment. It is something they can show to their parents, grandparents and aunts and uncles. They even want to publish another book."

Continued on page 11.

One exciting aspect of the project is that it was more than just "book learning," said BHI President Mike Hughes. "This book has a lot more to say than what's written between the covers. The bridges, contacts and friendships that were made will last a lifetime."

Part of the support Bechtel provided to the project was mentoring and classroom discussions on managing large projects, including budgeting, planning, resource allocation and editing. They also provided $5,000 to support the project — $1,000 for expenses in Ukraine and $4,000 for expenses here, such as photography and design.

Battelle provided similar editing and management support and hosted videoconferences at the Pacific Northwest National Laboratory to link the student work groups in Slavutych and Richland. Battelle Press published 3,000 copies of the book, their largest press run ever. More than 1,800 copies have been sold.

As part of the learning process, students developed the editorial plan and content, determined whom to interview and wrote the stories as well as collecting and taking photographs. Local Richland graphics designer Dorothy Wegeng helped with layout of the book.

A new slant

Dozens of books have been written about Hanford and Chornobyl over the years, but this one comes from a new angle — the perspective of young people who share many of the same concerns about their past and future. It includes articles written by students in each community, as well as interviews with early residents and workers.

The 306-page book is written in English and the Ukrainian language. According to the book summary, "The students from Slavutych and Richland describe the effects of growing up in communities purposely developed in isolation or secrecy because of their nuclear-based industries, and discuss their future in these towns as demand for nuclear energy declines."

Richland is the town where most of Hanford's early workers lived, while Slavutych is a new town. It was created after the accident at Chornobyl to house workers and their families evacuated from nearby Prypyat. Its 26,000 people face an uncertain future, as the remaining operating nuclear plant at Chornobyl will close in December, putting 6,000 people out of work.

As a result, part of Ryazanova's book promotion trip to the United States involved job hunting. In Slavutych, she teaches Russian and the language of the Ukraine to employees of Bechtel, Battelle and other companies working at Chornobyl.

Because she is fluent in Russian, Spanish and English as well as her native tongue, Ryazanova also works as an interpreter and is hoping those skills translate into a job in the United States. Her husband is a carpenter and wood carver. They have two teenage boys who wonder about their future in an uncertain economy.

Having economies that are highly dependent on a single industry is one of the many similarities of the two nuclear communities. The book, *Nuclear Legacy: Students of Two Atomic Cities*, is available at local bookstores and from major online booksellers. ❖

CH2MHILL Hanford Group, Inc.

NHC Numatec Hanford Corporation An SGN/Cogema, Inc. Company

CH2M HILL, NUMATEC PEN AGREEMENT: CH2M HILL Hanford Group President and General Manager Fran DeLozier and Xavier Hubert, president of Numatec Hanford, sign a new two-year subcontract as Tom Bateman (center), CHG director of Contracts and Procurement, looks on. The new agreement is in effect through Sept. 30, 2001. Some NHC managers and engineers are fully integrated into CHG tank-farm activities, and others sup-port CHG project managers in the design, construc-tion and testing of major construction projects. NHC also plans retrieval engineering operations to support waste delivery to the proposed vitrification plant.

Public comments sought by Sept. 5 on 300 Area cleanup plan

A public comment period on the proposed plan to clean up the last operable units on the Environmental Protection Agency's National Priorities List in Hanford's 300 Area is being extended until Sept. 5 by the Tri-Party agencies. This area includes two burial grounds with highly contaminated waste and 54 other sites that contain hazardous, radiological and mixed waste.

The cleanup area — part of the workscope of Bechtel Hanford — is known as the 300-FF-2 Operable Unit. The 300 Area was placed on the list by the Environmental Protection Agency in 1989 because of soil and groundwater contamination from past fuel fabrication and laboratory activities in the 300 Area.

The 300-FF-2 Operable Unit includes the 618-10 and 618-11 burial grounds, which were used from 1953 to 1967 for the disposal of highly contaminated radioactive waste. Other cleanup sites in the operable unit are trenches, storage areas and process sewers in and near the 300 Area, along with seven general-content burial grounds that operated from the mid-1940s to the mid-1970s. The waste sites received various hazardous, radiological and mixed wastes.

The preferred cleanup option for the 300-FF-2 area is to remove the contaminated material, treat it as necessary and then dispose of it at an engineered facility such as the Environmental Restoration Disposal Facility. The cost for all of the waste sites is $511.8 million. This cost largely results from the highly contaminated waste in two burial grounds within the operable unit.

The proposed cleanup standards are consistent with future industrial use of the area. Remediation of 11 of the waste sites in the operable unit could begin as early as fiscal year 2002.

The two other operable units on the National Priorities List in the 300 Area are currently being remediated and monitored. These areas include contaminated soil and debris near the 300 Area industrial complex and contaminated groundwater.

Comments on the 300-FF-2 cleanup approach can be submitted to Mike Goldstein of the EPA via e-mail to goldstein.mike @epa.gov. All comments will be considered by the TPA agencies and a decision will be reached by the end of 2000. ✦

LETTERS

Employees are invited to write letters of general interest on work-related topics. Anonymous letters will not be printed. We reserve the right to edit letters or not to accept letters for publication. Send your letters to the *Reach*, B3-30, or to *Hanford Reach on e-mail. Letters are limited to 300 words, and must include your name, company, work group and location. Opinions expressed are those of the author and not of DOE-RL, ORP or their contractors.

In appreciation

No words can express our deepest appreciation for the support and compassion we have received from many folks at Hanford for our loss. Although I cannot list each person individually we thank you all from the bottom of our hearts.

For some reason God wanted my husband, Don, and granddaughter, Bethany. I do not understand why He took them from us but I was more fortunate than many by having Don with me for 36 years. Don's support and wit helped me through some very hard times. And although I only had Bethany for four years, they were filled with more love and fun than many grandparents receive in their lifetime. Bethany's intelligence always amazed me and her sense of humor always had me laughing. I was truly blessed.

Myrna Sills
Fluor Hanford

Where did money go?

I would like to comment on the "Hanford Fire Relief Fund." I don't think anyone should be soliciting funds for any fund controlled by the Red Cross. According to one of the victims of the fire, he has received more donations from independent people and businesses (i.e., Wal-Mart, Home Depot, wineries and private citizens) than he's received from the Red Cross. He has told his co-workers that he's only received about $300 from the Red Cross and almost $1,500 from private donations directly to him.

According to the *Tri-City Herald*, $135,000 already has been donated to the Hanford Fire Relief Fund. If the Red Cross has evenly distributed funds to all the 11 families, they've given out $3,300. Where is the other $131,700?

I realize that some of the money should go to the Red Cross volunteers, but shouldn't the bulk of the money go to help the families, many of whom lost everything?

I would like to see Michele Gerber do some in-depth investigating and provide a full accounting of the donated monies. Her findings should be made available, if not to the public who has donated this money expecting the bulk of it to go to the victims of the fire, then at least to the fire victims who expected some help and have received little in comparison to the reportedly donated figure. Perhaps she should talk in depth to the victims to see exactly what they have received.

Karen Vermillion
CH2M HILL Hanford Group

Editors' note: Buddy Davis, executive director of the local Red Cross chapter, says volunteers are still working with the Benton City families to determine their needs. In addition to providing emergency food, shelter, clothing and medicine, the Red Cross works with families on their disaster recovery plans, replaces basic items, and helps them apply for other assistance. The chapter follows the Red Cross National Standard Disaster Assistance Guideline in helping each family. A contribution to the American Red Cross Disaster Relief Fund remains the best way to offer immediate help in any disaster, according to Davis.

CALENDAR

Red Bead Experiment at Hanford Performance Indicator Forum

The Red Bead Experiment will be presented at two Hanford Performance Indicator Forum sessions on Aug. 14, 2:30 - 4 p.m., and Aug. 16, 7:30-9 a.m. Both sessions will be held the Federal Building Auditorium in Richland. Steve Byers of CH2M HILL Hanford Group and Steve Prevette of Fluor Hanford will present Dr. W. Edward Deming's interactive teaching tool.

In the experiment, a corporation is formed by participants who assume the roles of workers, quality control personnel, a data recorder and a foreman. The corporation's product is white beads, produced by dipping a paddle into a supply of beads, which also contain some defective red beads. The production of the beads is strictly controlled by an approved procedure. Various techniques are used to ensure a quality (no red

Continued on page 14.

bead) product. The experiment demonstrates the effectiveness of various methods used by the workers to achieve a quality product. At the end of the experiment, a statistical process control chart is used to examine the results.

These sessions have received positive feedback in the three Integrated Environment, Safety and Health Management System (ISMS) Workshops that were held in the past year, including positive comments by Ted Wyka of Department of Energy Headquarters. At DOE presentations, the Red Bead Experiment is reviewed in the context of the guiding principles and core functions of ISMS. ✦

NEWSBRIEFS

PTB transfer approved for Kelly

Diane Kelly, a material coordinator for CH2M HILL Hanford Group, Inc., has been approved to receive personal time bank transferred hours. Diane's son was recently diagnosed with testicular cancer, which has spread to his lungs and brain. He will be undergoing chemotherapy over the next three months. Kelly needs to be with her son during this period.

CHG employees who would like to transfer PTB hours to Kelly should complete a PTB/Vacation Transfer Request Form (site Form A-6002-807). Send the completed form to Dean Dennis, CHG Human Resources, R2-57. The time should be transferred in one-hour increments.

Humane Society donations sought

Although the Benton Franklin Humane Society closed its shelter earlier this year, it is working to generate a consistent, sustainable income to re-open the shelter to serve both counties. You can help by participating in the new donation program, E-Check. The Humane Society receives support from several Hanford contractors.

By filling out an authorization form specifying the amount of monthly donation and your bank account information, the amount you specify will be deducted from your account each month and deposited into a BFHS account.

All donations to the Benton Franklin Humane Society are tax deductible and you may terminate your donation at any time. To receive an authorization form, download it from **www.bfhs.com**, or contact BFHS at 545-9301.

RYSC AmeriCorps has community service jobs

The Regional Youth Service Corps, a division of AmeriCorps, has 40 openings for workers to help Tri-Cities citizens in the areas of reading and math skills, substance abuse prevention and seniors' assistance. Anyone age 18 to 80 can apply. The one-year community service jobs need to be filled by September.

Individuals who join RYSC AmeriCorps earn a living allowance of $720 per month, have health insurance, and receive leadership training and $4,725 to help pay for school. For more information on RYSC AmeriCorps, contact Ed Bayha at rysc2@owt. com or 547-6607.

'Fill the boot' to help MDA on Aug .17

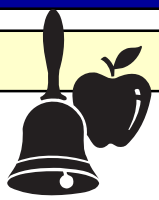
Hanford firefighters are busy shining their boots as they get ready for their annual "Fill the Boot" drive for the Muscular Dystrophy Association Thursday, Aug. 17.

During the morning rush hour, uniformed Hanford firefighters and DynCorp Tri-Cities Services employees will be passing their fire boots at the Yakima and Wye Barricades, the George Washington Way and Cypress Street Gates in the 300 Area, the A and B gates in the 400 Area, and at Stevens Center and Energy Northwest to collect your donations for "Jerry's Kids." If you miss giving a donation to the firefighters at these access points, you can always drop off a donation at one of the fire stations.

For safety reasons, collections will only be accepted from the driver's side, so carpool and vanpool riders need to make sure they give their money to the driver. Firefighters will be in uniform and wearing safety vests. This year's goal is $4,000.

Over the past two years, the Hanford firefighters have collected $20,000 through their boot drive, annual charity golf tournament and the MDA Ball.

"Every dollar makes a difference in the life of someone afflicted with these terrible diseases," said this year's coordinator, Hanford paramedic Kathi Young. "Hanford employees are so giving, I just know that we'll be able to reach our goal." ✦



CLASSES

Washington State University Tri-Cities' University Center for Professional Education offers:

- **REASON: Point of Occurrence Root Cause Analysis Training** – Sept. 25-26. This structured, two-day training course is designed to provide operations personnel with REASON causal factor analysis methods and skills. The training equips attendees with the advanced skills to produce objective, concise, accurate and consistent results required in critical event analysis. It has been designed for professionals with responsibilities for developing and maintaining control of operations reliability such as operations managers, maintenance and engineering managers, occurrence investigators, process analysts, operations supervisors, industrial engineers and total quality professionals.

  Contact WSU Tri-Cities' University Center for Professional Education office at 372-7200 for more information and tuition costs.

Protrain offers specials in computer training:

Outlook 2000

- **Beginning** — Aug. 16. Learn to work with Outlook Office Assistant, messaging, message management, scheduling with the calendar, and using journal, notes and other features. Cost: $99.
- **Intermediate** — Aug. 21. Learn to use the new advanced calendar functions and contact features, manage tasks, customize inboxes, use the new Outlook features with the Internet and use the new advanced inbox features. Cost: $99

  August Special! Register in both Outlook 2000 classes for $189.

Crystal Reports

- **Introduction** — Aug. 21. Learn how to create reports and formulas and export. Cost: $215.
- **Advanced** — Aug. 28. Compose enhanced reports and learn the full use of the Crystal Reports program. Learn advanced formulas, conditional formatting, SQL/ODBC query designer, graphing, Web reporting and advanced cross-tabs. Cost: $215.

  August Special! Enroll in both classes for $398.

SQL Systems Administration Training

Learn SQL server architecture, components, installing and configuring, managing security, managing data files and transferring data.

August Special! For more information call Protrain.

Primavera 602, 603, 604

Aug. 8, 9 and 10. Learn planning and cost analysis, managing Project 98, and creating reports and graphics. Prerequisite: Primavera 601. Cost: $395 each.

Register for all three classes for only $995 and save $200 off original combined unit price.

Protrain offers two levels of certification:

Proficient/Core and Expert in the Microsoft Office User Specialist (MOUS) Program.

For more information call 946-1123. ✦

H.E.R.O. short

NEW TRIPS UPCOMING — Watch for 2001 trip information in the August 21 *Hanford Reach*.

POLICY FOR NON-SUFFICIENT FUNDS CHECK — Associated NSF bank fees will be passed on to check issuers. HERO will not absorb the costs.

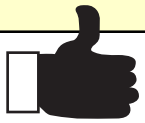
HANFORD BOARD OF DIRECTORS AND AREA REPS/ HERO ACTIVITIES/TICKET SELLERS INFORMATION — A reminder that until the new HERO Web page has been created and is in use, HERO information can be accessed on the Hanford Intranet Web site by clicking on "Project Hanford Management Contract," "General Information," "Hanford Information," and then clicking "HERO - Hanford Employee Recreation Organization." To make it easier to access this information, we suggest that you save it to "Favorites" or "Bookmarks" (located on the toolbar).

PENDLETON ROUND-UP TIME — Tickets are sold out.

More information will appear in the *Hanford Reach* and on the Hanford Intranet Web site as details develop and additional event and trips are offered. ✦

Regular Features

B R A V O



CH2M HILL Hanford Group announces winners

CH2M HILL Hanford Group, Inc. Employee Recognition Council honored performance award winners for May and June during a luncheon held July 26 in the 2704-HV Building.

For the month of May, **Carl Ramon** was the winner in the safety category. Other individual winners were **Bill Roberston, Jerry Ferson, Nancy Walker, Evelyn Weiss, Mark H. Brown, Clifford Hamton, Jim Hamilton, Fred Mangan, Brian Suyama, Jeff Tucker**, and **Perry Smith**. The team of **Karen Ashley, Curt Hoffman, Jay Jones, Pam Sanders, Ken Smith, Tammy Tatro**, and **Blan Windsor** were the winners in the team category.

For the month of June, **Kern Gauntt, Bob Hasbargen** and the team of **Bart Anderson, Mike Copeland, Ray French, Shandra Keas, Kevin Ockerman, Chuck Orem, Lee Roberts, Douglas Staudt, Mike Widdis** and **Vivian Wyant** were the winners in the safety category. Other individual winners were **James Taylor, John Airoldi, Laura Nogle, Rick Wittman, Butch Rauch, Lee Livesey** and **Steve Chapman**. The team of **Becky Bechtold, Mark Duchshererm, Joy Smith, Bill Callaway** and **Ingrid Wright** were winners in the team category.

Additional information about the awards and winners' accomplishments is on the Hanford Web site at **http://twrsll.rl.gov/recog/index.htm**. Nomination forms are available on Site Forms (A-6001-358).

Work on traffic modification commended

Ed Perry and **Rudy Cisneros** of Fluor Hanford and **Rusty Knight** and **Dave Penfield** of DynCorp Tri-Cities Services were commended for their quick response to a traffic safety concern in the 400 Area. The commendation was in a July 26 letter written by chairman of the Project Interface and Compliance Employee Safety Council, Fluor Hanford's James Stowe to Jerry Hipp and Tom Savage of DynCorp Tri-Cities.

The Fluor Hanford and DynCorp employees worked to modify the entry into the parking lot in front of 4706 and the Fuels and Materials Examination Facility to enhance visibility and to allow drivers to slow down for the turn. The modifications included adding and repositioning reflectors and patching asphalt. The work was completed within a week of the original request for help.

"Their effort is a fine example of the good work that can be done here at Hanford. With people working together to get the job done there is not anything that we cannot overcome. Again, we commend them for their prompt and professional help in correcting our safety concern," wrote Stowe.

V A N P O O L S

anpool ads are run for two weeks. Ads must be resubmitted to run in subsequent issues of the *Hanford Reach*. The deadline for submissions is Thursday, 10 days prior to publication.

Protection Technology Hanford reminds employees to wear their badges. Vanpool and carpool drivers are responsible for ensuring riders are badged. If a passenger forgets his or her badge, Patrol must be informed at the barricades. For more information, look on the Hanford Web in the Projects and Activities section, Safeguards and Security (PHMC) at **http://www.rl.gov:1050/sas/pg1v3htm**.

BENTON CITY

Vanpool riders wanted to 200 W (and WSCF). Current rate is $52. Contact **Charlotte Burruss** at 373-4046. 8/7

KENNEWICK

Van No. 85 to 200E, 8x9s, dependable, friendly and first in safety, is looking for one rider. Current stops are 10th and Washington, Huntington Transit Station, Federal Building, 2750, 2101-M, B Plant and MO-724. Call **Eric** at 373-4497 or 586-2755, or **Pat** at 373-3142. 7/31

Join us on Van No. 90 to 200E Area, 8x9 schedule. Picks up at Fred Meyer (2811 W. 10th Ave.) and Shari's (1200 N. Columbia Center Blvd) in Kennewick. Stops at 2750-E, MO-251, MO-414, MO-286, MO-294, 2727-E and 2025-EA. If you will share driving responsibilities for a lower rate, please say so when you call. Contact **Rex Bendixsen** at 372-1052 or **Deanna Baird-Scott** at 373-6046. 8/7

8x9 vanpool (7 to 4:30) to 200E needs riders. We try to keep ridership aroomy and comfortable level. Current route is from 36th and Vancouver to Olympia, Jean Street to 27th, Vancouver to 4th, down Clearwater to the Huntington bus stop, to Edison St. via Morain, West Hood, Volland, Canal, and out the Edison exchange. Stops at 2750, WESF and ends at 2704-HV. Call **Steve** at 372-0382. 8/7

8x9 vanpool from Kennewick to 200E needs riders. Picks up at Kennewick Albertson's and Federal Building. Stops at side/back of 2750 and 2704-HV. Contact **John** at 373-1207. 7/31

YAKIMA

Rider seeking 8x9 (6:30 a.m-4 p.m.) vanpool or carpool from Yakima to 400 Area. Contact **David Frey** at 372-2736. 8/7